## Claims:

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1. A method for the rapid typing or enumeration of microorganisms comprising:

immobilizing a capture antibody on a solid support;

contacting a said immobilized capture antibody with a sample;

contacting the contents of said sample with a predetermined amount of substrate, wherein metabolism of said substrate by the microorganisms produces a marker;

digesting the microorganisms;

adding a primary antibody specific to said marker;

adding a second antibody specific for said primary antibody; and conjugated to a reporter molecule;

detecting the reporter molecule conjugated to the second antibody; and determining the type or quantity of microorganism present.

- 2. The method of claim 1, wherein the digestion of said microorganisms comprises cell lysis.
- 3. The method of claim 1, which is capable of detecting 1000 colony forming units per ml or less of said microorganism.
- 4. The method of claim 1, which is capable of detecting 100 colony forming units per ml or less of said microorganism.
- 5. The method of claim 1, wherein the sensitivity of said method is capable of detecting 10 colony forming units per ml or less of said microorganism.
- 6. The method of claim 1, wherein the type or enumeration of microorganisms is determined in less than two hours.
- 7. The method of claim 1, wherein the type or enumeration of microorganisms is determined in less than one hour.
- 8. The method of claim 1, wherein the reporter molecule is selected from the group consisting of: a bioluminescent protein, a chemiluminescent dye, a fluorescent dye, an enzyme, a latex particle, a magnetic particle, a radioisotope, a visible dye, and combinations thereof.

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- 9. The method of claim 1, wherein the substrate is dimethylthiazolyldiphenyl tetrazolium, iodonitrotetrazolium, nitrotetrazolium blue, or triphenyltetrazolium.
- 10. The method of claim 1, wherein the microorganism comprises one or more species of bacteria.
- 11. The method of claim 1, wherein the sample is selected from the group consisting of a bodily fluid, a blood sample, a clinical sample, a cosmetic sample, an environmental sample, a food sample, an industrial sample, pharmaceutical sample, a tissue sample, a tissue homogenate, and combinations thereof.
- 12. The method of claim 1, wherein the microorganisms are digested prior to their contact with said capture antibody.
- 13. A method for the rapid typing or enumeration of microorganisms comprising:

immobilizing a capture antibody on a solid support;

contacting a said immobilized capture antibody with a sample;

contacting the contents of said sample with a predetermined amount of substrate, wherein metabolism of said substrate by the microorganisms produces a marker;

digesting the microorganisms;

adding a primary antibody specific to said marker;

detecting said primary antibody bound to said marker; and

determining the type number of microorganisms present in said sample.

- 14. The method of claim 13, wherein the digestion of said microorganisms comprises cell lysis.
- 15. The method of claim 13, which is capable of detecting 1000 colony forming units or less of said microorganism.
- 16. The method of claim 13, which is capable of detecting 100 colony forming units or less of said microorganism.
- 17. The method of claim 13, wherein the sensitivity of said method is capable of detecting 10 colony forming units or less of said microorganism.

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- 18. The method of claim 13, wherein the type or enumeration of microorganisms is determined in less than two hours.
- 19. The method of claim 13, wherein the type or enumeration of microorganisms is determined in less than one hour.
- 20. The method of claim 13, wherein the substrate is dimethylthiazolyldiphenyl tetrazolium, iodonitrotetrazolium, nitrotetrazolium blue, or triphenyltetrazolium.
- 21. The method of claim 13, wherein the microorganism is one or more species of bacteria.
- 22. The method of claim 13, wherein the sample is selected from the group consisting of a bodily fluid, a blood sample, a clinical sample, a cosmetic sample, an environmental sample, a food sample, an industrial sample, pharmaceutical sample, a tissue sample, a tissue homogenate, and combinations thereof.
- 23. The method of claim 13, wherein the microorganisms are digested prior to contact with the capture antibody.
- 24. The method of claim 13, wherein the primary antibody is conjugated to a reporter molecule.
- 25. The method of claim 24, wherein the reporter molecule is selected from the group consisting of: a bioluminescent protein, a chemiluminescent dye, a fluorescent dye, an enzyme, a latex particle, a magnetic particle, a radioisotope, a visible dye, and combinations thereof.
- 26. A kit for the rapid detection or enumeration of microscopic organisms comprising:

a solid support;

capture antibodies affixed to said solid support;

- a soluble substrate which upon uptake by actively respiring organisms is metabolized to a water-insoluble molecule;
  - a primary antibody specific for said water-insoluble molecule; and
- a second antibody specific for said primary antibody and conjugated to a reporter molecule.

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- 27. The kit of claim 26, wherein the solid support is supplied with said capture antibodies immobilized thereto.
- 28. The kit of claim 26, further comprising a wash buffer, a dilution buffer, and a digestion reagent.
- 29. The kit of claim 26, wherein the reporter molecule is selected from the group consisting of a bioluminescent protein, a chemiluminescent dye, a fluorescent dye, an enzyme, a latex particle, a magnetic particle, a radioisotope, a visible dye, and combinations thereof.
- 30. The kit of claim 26, wherein said reporter molecule comprises an enzyme.
  - 31. The kit of claim 26, further comprising a nutrient media.
- 32. The kit of claim 31 wherein the nutrient media comprises a reducing sugar and a mild oxidizing agent
- 33. The kit of claim 32 wherein the mild oxidizing agent is NAD<sup>+</sup> and the reducing sugar is glucose.
- 34. A kit for the rapid detection or enumeration of microscopic organisms comprising:
  - a solid support;
  - capture antibodies affixed to said solid support;
- a soluble substrate which upon uptake by actively respiring organisms is metabolized to a water-insoluble molecule; and
  - a primary antibody specific for said water-insoluble molecule.
- 35. The kit of claim 34, wherein the primary antibody is conjugated to a reporter molecule.